

**ATTACHMENT A**

Claims 1 - 20: (Cancelled)

21. (New): A method of selecting Phillips catalysts from a multiplicity of Phillips catalysts based on catalytic properties of the Phillips catalysts comprising:

- in a pretreatment step, converting a multiplicity of catalyst precursors or catalyst supports in parallel into Phillips catalysts in an array of reactors, wherein the pretreatment step comprises at least one thermal treatment step at from 250 to 1200°C;
- in a polymerization step, converting at least one starting material into at least one polymer product with the aid of the respective Phillips catalysts; and
- in an analysis step, analyzing at least one composition and chosen properties of the polymer product or products formed in the polymerization step.

22. (New): The method as claimed in claim 21, wherein the polymerization step is carried out in parallel for the multiplicity of catalyst precursors or catalyst supports in the array of reactors.

23. (New): The method as claimed in claim 22, wherein the pretreatment step and the polymerization step are carried out in the same array of reactors.

24. (New): The method as claimed in claim 22, wherein conditions in at least one of the pretreatment step and

polymerization step in the respective reactors differ in at least one physical parameter.

25. (New): The method as claimed in claim 21, wherein the Phillips catalyst in the respective reactors differ in at least one chemical property.

26. (New): The method as claimed in claim 21, wherein a feed stream comprising at least one monomer is fed continuously to the respective reactors in at least one of the pretreatment step and the polymerization step.

27. (New): The method as claimed in claim 26, wherein, in at least one of the pretreatment step and the polymerization step, the feed stream is passed through the respective reactor in such a way that a fluidized bed of catalyst is produced.

28. (New): The method as claimed in claim 21, wherein the polymer product or products is selected from the group consisting of polyethylene, polypropylene, poly-1-butene, their copolymers and their stereoisomers.

29. (New): The method as claimed in claim 28, wherein chosen properties of the polymer product are selected from the group consisting of density, molar mass distribution  $M_w/M_n$  and its moments, limiting viscosity in solution in accordance with ISO 1628, melt flow rate in accordance with DIN EN ISO 1133, proportion of comonomer, and combinations thereof.

30. (New) The method as claimed in claim 21, wherein the thermal treatment step is carried out at from 350 to 1000°C.

31. (New): An array of parallel reactors for implementing a process for selecting Phillips catalysts from a multiplicity of Phillips catalysts based on catalytic properties of the Phillips catalysts comprising:

- in a pretreatment step, converting a multiplicity of catalyst precursors or catalyst supports in parallel into Phillips catalysts in an array of reactors, wherein the pretreatment step comprises at least one thermal treatment step at from 250 to 1200°C;
- in a polymerization step, converting at least one starting material into at least one polymer product with the aid of the respective Phillips catalysts; and
- in an analysis step, analyzing at least one composition and chosen properties of the polymer product or products formed in the polymerization step;

wherein each reactor in the array of reactors are parallel and comprise:

- a housing comprising a lower part, the lower part comprising a bottom for accommodating a catalyst bed, and an upper part which can be connected in a sealed manner to the lower part, wherein the housing can be sealed from the outside;
- an inlet for introducing a feed stream into the reactor comprising an inlet opening which is directed into an interior of the reactor and is arranged so that the inlet opening projects into the

catalyst bed and the feed stream allows fluidization of the catalyst bed to form a fluidized bed of catalyst, with no internals which restrict the extent of the fluidized bed are present within the housing; and

- an outlet for discharge of the outflow stream from the reactor.

32. (New): The array of reactors as claimed in claim 13, wherein the inlet is configured as a capillary.

33. (New): The array of reactors as claimed in claim 14, wherein the capillary is sealed into the upper part.

34. (New): The array of reactors as claimed in claim 13, wherein each reactor has a first temperature control unit which serves to control the temperature of the respective reactor and comprises at least one of a heating and cooling element located at an outer surface of the lower part and a temperature sensor for measuring the temperature in the fluidized bed.

35. (New): The array of reactors as claimed in claim 13 further comprising a second temperature control unit which serves to control the temperature of the feed stream and is thermally connected to the inlet outside the array of reactors.

36. (New): The array of reactors as claimed in claim 13, wherein the array of reactors are made of fused silica or stainless steel.

37. (New) The method as claimed in claim 1, wherein the thermal treatment is carried out at from 400 to 925°C.

38. (New): A method of selecting polymerization catalysts from a multiplicity of polymerization catalysts based on catalytic properties of the polymerization catalysts comprising:

- in a pretreatment step, converting a multiplicity of catalyst precursors or catalyst supports in parallel into polymerization catalysts in an array of reactors, wherein the pretreatment step comprises at least one thermal treatment step at from 250 to 1200°C;
- in a polymerization step, converting at least one starting material into at least one polymer product with the aid of the respective polymerization catalysts; and
- in an analysis step, analyzing at least one composition and chosen properties of the polymer product or products formed in the polymerization step,

wherein a feed stream comprising at least one monomer is fed continuously to the respective reactors in at least one of the pretreatment step and the polymerization step, and the feed stream is passed through the respective reactor in such a way that a fluidized bed of catalyst is produced.

39. (New): The method as claimed in claim 38, wherein the polymerization step is carried out in parallel for the multiplicity of catalyst precursors or catalyst supports in the array of reactors.

40. (New): The method as claimed in claim 39, wherein the pretreatment step and the polymerization step are carried out in the same array of reactors.

41. (New): The method as claimed in claim 39, wherein conditions in at least one of the pretreatment step and polymerization step in the respective reactors differ in at least one physical parameter.

42. (New): The method as claimed in claim 38, wherein the polymerization catalyst in the respective reactors differ in at least one chemical property.

43. (New): The method as claimed in claim 38, wherein the polymerization catalyst is an inorganic catalyst.

44. (New) The method as claimed in claim 43, wherein the inorganic catalyst is a Phillips catalyst.

45. (New): The method as claimed in claim 38, wherein the polymer product or products is selected from the group consisting of polyethylene, polypropylene, poly-1-butene, their copolymers and their stereoisomers.

46. (New): The method as claimed in claim 45, wherein chosen properties of the polymer product are selected from the group consisting of density, molar mass distribution  $M_w/M_n$  and its moments, limiting viscosity in solution in accordance with ISO 1628, melt flow rate in accordance with DIN EN ISO 1133, proportion of comonomer, and combinations thereof.

47. (New) The method as claimed in claim 38, wherein the thermal treatment step is carried out at from 350 to 1000°C.

48. (New): An array of parallel reactors for implementing a process for selecting polymerization catalysts from a multiplicity of polymerization catalysts based on catalytic properties of the polymerization catalysts comprising:

- in a pretreatment step, converting a multiplicity of catalyst precursors or catalyst supports in parallel into polymerization catalysts in an array of reactors, wherein the pretreatment step comprises at least one thermal treatment step at from 250 to 1200°C;
- in a polymerization step, converting at least one starting material into at least one polymer product with the aid of the respective polymerization catalysts; and
- in an analysis step, analyzing at least one composition and chosen properties of the polymer product or products formed in the polymerization step;

wherein each reactor in the array of reactors are parallel and comprise:

- a housing comprising a lower part, the lower part comprising a bottom for accommodating a catalyst bed, and an upper part which can be connected in a sealed manner to the lower part, wherein the housing can be sealed from the outside;
- an inlet for introducing a feed stream into the reactor comprising an inlet opening which is directed into an interior of the reactor and is

arranged so that the inlet opening projects into the catalyst bed and the feed stream allows fluidization of the catalyst bed to form a fluidized bed of catalyst, with no internals which restrict the extent of the fluidized bed are present within the housing; and

- an outlet for discharge of the outflow stream from the reactor;

wherein a feed stream comprising at least one monomer is fed continuously to the respective reactors in at least one of the pretreatment step and the polymerization step, and the feed stream is passed through the respective reactor in such a way that a fluidized bed of catalyst is produced.

49. (New): The array of reactors as claimed in claim 48, wherein the inlet is configured as a capillary.

50. (New): The array of reactors as claimed in claim 49, wherein the capillary is sealed into the upper part.

51. (New): The array of reactors as claimed in claim 48, wherein each reactor has a first temperature control unit which serves to control the temperature of the respective reactor and comprises at least one of a heating and cooling element located at an outer surface of the lower part and a temperature sensor for measuring the temperature in the fluidized bed.

52. (New): The array of reactors as claimed in claim 48 further comprising a second temperature control unit which serves to control the temperature of the feed stream and is



thermally connected to the inlet outside the array of reactors.

53. (New): The array of reactors as claimed in claim 48, wherein the array of reactors are made of fused silica or stainless steel.

54. (New): The method as claimed in claim 38, wherein the polymerization catalyst is a mineral catalyst.

55. (New) The method as claimed in claim 38, wherein the thermal treatment is carried out at from 400 to 925°C.